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Proposed papers; abstracts May 1999

2. Different concepts of price indices serving different purposes.

Woolford: **Defining the item domain for the Consumer Price Index.** There is no single, unambiguous list of items that should be included in the CPI. Compilers of price indexes have long recognised that, in designing a price index, the item or commodity coverage depends on the specific purpose the index is intended to serve. This feature of index design appears to be less well appreciated by the broader community of users of the CPI. That this is so is not surprising. The alternative measurement objectives or purposes of CPI's have not been well articulated by index practitioners. This paper proposes three alternative measurement objectives that could be set for the CPI and proceeds to develop matching item domains.

Diewert: **The CPI: A compensation index, a consumption deflator or a measure of inflation.** My initial argument will be that a plutocratic true cost of living index can be used for all three of the purposes in the title under simplified conditions when there are no consumer durable goods and no seasonal commodities. However, the existence of durable and seasonal commodities means that a single CPI will no longer be suitable for all purposes.

Turvey: **True Cost of Living Indexes.** I do not propose to submit a general discussion of the purposes of an index but will just present my critique of the Cost of Living approach. A draft having been strongly criticised by Triplett and Diewert, it should offer the opportunity for lively discussion.

Triplett: **The Theoretical Cost-of-Living Index and the Actual CPI** In the countries of North America, the theory of the cost-of-living index (COL) provides the conceptual framework for practical estimation of consumer price indexes (CPI). In most of the rest of the world, national statistical offices do not accept the cost-of-living index framework for their consumer price indexes, in some cases rejecting the COL explicitly and in others implicitly.

This paper reviews the content of the modern theory of the cost-of-living index, reviews the rationales given by statistical offices that accept the COL framework for their indexes as well as the rationales given by national statistical offices that reject it. It also reviews the alternative conceptual frameworks that have been adopted in cases where the cost-of-living index framework has been rejected. In passing, it gives examples where the cost-of-living index framework has been used for practical decision making in the estimation of consumer price indexes.

Dalén: Purpose and construction of new measures of consumer inflation in Sweden.

The paper will present and discuss key proposals by the Swedish CPI Commission. The Commission is now reviewing the underlying principles of the CPI and will give its final proposals by July 1, 1999.

Among the issues which the Commission has on its agenda and which will be discussed in the paper are:

i) Does the rise of the HICP in Europe, intended to measure inflation, make it possible to let the national CPI be a pure instrument of compensation? ii) Should many different indices replace or complement the CPI? iii) How should these indices best be constructed in order to fulfill their stated purposes and to avoid bias? Various alternatives involving different index formulas, reference periods (month vs. year) and chain linking choices will be compared and discussed.

Fenwick: The impact of choice of base month on the relative performance of different formulae used for aggregation of Consumer Price Index data at an elementary aggregate level.

The UK Harmonised Index of Consumer Price (HICP) is about one percentage point lower than the nearest national equivalent, the Retail Prices Index (excluding mortgage interest payments) or RPI(X). Half of this difference is due to the fact that the HICP uses the geometric mean to aggregate locally collected prices into elementary aggregates whilst the RPI and RPI(X) use a combination of the average of relatives (AR) and the ratio of averages (RA). This “formulae” effect is much larger in the UK than in other countries. The paper considers three factors which may have contributed to this:

- the relative broad item descriptions used in the UK for price collection;
- the treatment of centrally collected prices in the sample design, particularly in relation to stratification;
- the choice of January as a base month particularly for items which are affected by January sales.

It presents theoretical and analytical evidence of the impact of these three factors and in particular gives the results of a simulation exercise involving the re-calculation of the RPI using alternative base months including December as used by most other countries.

There are potentially important implications both for consumer price index methodology and for international comparability between indices.

Balk: On Curing the CPI's Substitution Bias

In a recent article Shapiro and Wilcox (1997) proposed a method for “picking the low-hanging fruit” of the CPI bias. They suggested a base period weighted generalized mean price index to cure the (upper level) substitution bias. This index could be calculated in real time, provided that the exponent figuring in the formula is known.

Generalized mean price indices can be conceived as cost of living indices if the underlying (homothetic) preference ordering is characterized by a constant elasticity of substitution (CES). The exponent sought is then a simple function of this elasticity.

In this paper I review the (properties of the) cost of living indices associated with a CES preference ordering. In particular I propose a simple method for estimating the elasticity of substitution. This method does not require the estimation of a complete demand system.